



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/580,243

02/20/2007

John Taylor

Q95094

1649

23373 7590 03/30/2009
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

BHAT, NINA NMN

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

03/30/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,243	Applicant(s) TAYLOR, JOHN	
	Examiner N. Bhat	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's preliminary amendment of May 22, 2006 has been entered and acknowledged by the examiner.
2. The abstract of the disclosure is objected to because applicant has used the abstract from the corresponding PCT application, applicant should draft a new abstract on a single sheet in a single paragraph following the claims which includes only the information pertaining to the abstract of the invention. Correction is required. See MPEP § 608.01(b).
3. The disclosure is objected to because of the following informalities: On Page 4, line 1, the abbreviation "HRD" has not been defined and applicant should insert --heat recovery device (HRD)-- to obviate the objection. Also on Page 4, line 16, applicant is required to insert the heading --Brief Description of the Drawings--. Appropriate correction is required.
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
5. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown et al., US Patent 5,527,449.

Brown et al. teach a process and apparatus which converts waste oils, animal fats and vegetables oils into a useable diesel fuel and crude naphtha by thermal cracking. The apparatus includes introducing a waste oil into a still pot which is pumped from a storage tank (5) to a still pot or primary pool(13) in the thermal cracking unit (15), where the thermal cracker unit is fired with sludge removed from the principal pool of oil and fat undergoing vaporization. Part of the vapor is condensed in the tower and returned to the primary pool. The remainder of

Art Unit: 1797

the vapor flows to a first overhead condenser which cools and condenses the vapor into a liquid condenser which cools and condenses the vapor into a liquid and gas. The liquid descends through a secondary distillation tower into a secondary pool. The secondary pool is heated with flue gases vaporizing the liquid in the secondary pool, which ascend through the secondary distillation tower, a portion the vapor condenses in the secondary distillation tower and flows toward to the secondary pool. Non-condensed vapors partially condense in a second condenser. Fluids for the second overhead condenser flow to a light end flash tank. Liquid light ends flow to alight ends liquid storage. Waste gases from the light ends flash and are consumed as fuel by the burner. Liquid for the second pool is cooled in a product cool and stored in a diesel fuel storage tank. Off-specification liquids will be stored in a reflux storage tank which will be used in the primary distillation tower. [Note Figure 1 and Column 3, lines 8-60 and Column 5, lines 7-58] The process and apparatus as described fully anticipates applicant's method of converting animal fats and/or feedstock into gas oil fuel by introducing material including the animal fats into a still pot in the form of a liquor, heating, thermally cracking and reintroducing extracted material back into the still pot and separating lighter molecular weight compounds from the cracked material in the light ends and gas fuel using a distillation column and collecting a second mixture of gas fuel using condensing apparatus.

6. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Wansbrough et al., US Patent 5,885,444.

Wansbrough et al. teach a process which converts waste motor oil into diesel fuel. The process uses a thermal cracking process which generates a column of distilled fraction of diesel fuel mixed with light ends, the lights ends are flashed off to produce a high quality diesel fuel. Specifically as shown in Figure 1, and described in Column 2, line 19 et seq.: Wansbrough et al. teach that used feedstock oil is preheated by heat exchangers to a temperature of 500oF

Art Unit: 1797

prior to entering the thermal cracking unit which is a still pot (11) which is operated at a temperature of 625-700°F which is maintained by heat recovery unit (2) and, the system of Wansbrough is operated at as low a cracking temperature as possible to minimize formation of light ends. The mixed vapor/liquid resulting from cracking is returned to the vessel 11 to maintain the vessel (11) at a process temperature. From the still pot, the vapors are introduced into a distillation column (12) filled with standard packing material such as nutter rings, the lower molecular weight material fractions whose boiling point is that of a #2 diesel or less, light ends leave the top of the column (12) as vapors which then passed through a condenser and then subjected to a flash vessel, wherein the light ends are separated from the #2 diesel fuel which can be subjected to further filtering if desired. [Note Column 3, line 5-60] The process taught in Wansbrough fully anticipate applicants method of converting animal fats and/or other feedstocks, which would read on used motor oil, using a thermal cracking process including introducing material into a still pot, extracting a volume of the material from the still pot, heating the extracted material to a cracking temperature and reintroducing the extracted material back into the still pot followed by separating the light molecular weight compounds from the cracked material into a small fraction of the volatile light ends and a second mixture of fuel such as diesel by distillation and collecting the diesel fuel by means of a condenser.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Carroway teach a process of converting tallow to diesel fuel, this PG does not qualify as prior art but is cited for applicant's review. Lee et al. teach an apparatus for reclaiming fuel oil from waste oil using a semi-continuous thermal cracking process followed by product oil stabilization and storage and then final polishing of the cracked stabilized product. Shurtleff '808 and '349 teach an apparatus for reclaiming waste lubricant oils by an evaporator/heater process followed by separating, the heat is controlled to heat the waste oil in

Art Unit: 1797

the boiler to a temperature such that the light hydrocarbons remain unvolatilized. Martin teach a waste oil purifying process wherein the waste oil includes water , the waste oil is heated until light ends are vaporized which are then collected and polished into a useable fuel, the heavier ends remain as a liquid and used as a heating fuel. Troesch et al. teach a process for cleaning used oils. Keim et al. teach reprocessing contaminated oils such as crankcase oil by thermal treatment such as visbreaking followed by fractional distillation for the recovery of a plurality of useable fractions which are the subjected to hydrocracking operations.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. Bhat/
Primary Examiner, Art Unit 1797